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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,145	12/12/2003	Robert A. Cochran	10992601-2	1572

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HEWLETT-PACKARD COMPANY
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EXAMINER

PARK, ILWOO

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/735,145	COCHRAN, ROBERT A.
	Examiner Ilwoo Park	Art Unit 2182

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 December 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-4,6-11,13,14 and 17-19 is/are rejected.
- 7) Claim(s) 5,12,15 and 16 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-19 are presented for examination.

Double Patenting

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 5, 12, 15, and 16 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-4 of prior U.S. Patent No. 6,735,637. This is a double patenting rejection.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4 of U.S. Patent No. 6,735,637 contain every element of claims 1 and 13 of the instant application and as such anticipate claims 1 and 13 of the instant

application. "A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). "ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Court, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6-11, 13, 14, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kagimasa et al., US patent No. 5,511,177 in view of Erickson et al., US patent No. 5,940,862.

As to claims 1 and 13, Kagimasa et al teach a method and a storage device for improving the performance of a mirror split operation by a data storage device controller [see abstract; col. 8, lines 2-9], comprising: determining a mirror-I/O request-processing-to-local- I/O request-processing-rate ratio in order to process backlogged mirror I/O request prior to receiving a corresponding mirror split operation request [col. 8, lines 20-

32; col. 9, lines 32-42]; processing mirror I/O requests and local I/O requests according to the mirror-I/O request-processing-to-local- I/O request-processing-rate ratio until an expected time of occurrence of the corresponding mirror split operation [col. 10, lines 17-61].

However, Kagimasa et al teach do not teach that a split advance warning interface for receiving a split advance warning. Erickson et al teach a disk sequencer uses control words to identify starts and splits in headerless data sectors, wherein a sector pulse indicating a start of a data sector or an interrupt indicating a split in a data sector [abstract]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow Kagimasa et al's system to make use of Erickson et al's teaching in such a manner that an interface for receiving a split advance warning accordingly because it allows the system to use a faster and more efficient transmission for servicing the data request and storing the desired data, thus, improving the utilization of the bandwidth available for the data transfer, ensuring the split operation proceeding quickly.

Referring to claims 2-4, 6-11, 14, and 17-19, Kagimasa et al further teach the method and system including determining the mirror-I/O request-processing-to-local- I/O request-processing-rate ratio based on an estimated time for executing backlogged mirror I/O requests [col. 12, lines 32-36]; including determining the mirror-I/O request-processing-to-local- I/O request-processing-rate ratio based on an estimated number of backlogged mirror I/O requests [col. 12, lines 16-31]; including determining the mirror-I/O request-processing-to-local- I/O request-processing-rate ratio based on a current

number of backlogged mirror I/O requests [col. 9, lines 56-59]; wherein the split operation is directed to a mirror logical unit comprising a first logical unit and a second logical unit, the disk array controller mirroring all local I/O requests directed to the first logical unit that change data stored in the first logical unit to the second logical unit as mirror I/O requests [col. 7, lines 14-27; fig. 21] wherein the first and second logical units are both contained in the data storage device, the second logical unit is contained in a remote data storage device [ref nos. 7 and 8 in fig. 21]; wherein the data storage device controller maintains a number of mirror logical units [col. 11, lines 11-26; fig. 18].

Allowable Subject Matter

6. Claims 5, 12, 15, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

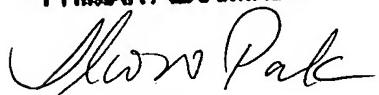
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571) 272-4083. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ILWOO PARK
PRIMARY EXAMINER



Ilwoo Park

October 1, 2005